BODY HOME : SUSTAINABLE FASHION DESIGN THROUGH ORIGAMI-INSPIRED GEOMETRIC SPACE EXPLORATION

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DESCRIPTION

The fashion industry faces increasingly pressure on sustainability challenges, including the generation of large quantities of discarded materials and energy-intensive manufacturing processes. While traditional clothing making aims for a perfect fit, it often leads to substantial offcuts during the cutting process, which brings negative impact natural environment. This research focuses on folded garment patterns (origami-inspired) to achieve a zero-waste technique within a sustainable circular strategy in fashion design.

The project explores applying three-dimensional concepts to the human body through a two-dimensional pattern, using origami-inspired geometric spaces. The goal is to create three-dimensional spaces on the body, avoiding offcuts during the cutting stage and achieving a zero-waste technique in circular design strategies. The process involves analyzing curves and proportions of various body parts to ensure a single piece of fabric can be folded to fit the body's contours. This enables designers to create clothing that fits the human body without generating material waste, improving production efficiency, and optimizing manufacturing processes during the design stage. The origami-inspired zero-waste pattern also introduces a unique, fresh artistic style distinct from traditional patterns.

In addition to transcending inherent boundaries of the human body, individual folded pieces can become modular components of clothing. The modular design encourages consumers to actively participate in the creative personalized process. They can organize their garments according to personalized preferences, involving detachable functions while adjusting their closet based on evolving tastes. This strengthens the relationship connection between consumers and their clothing, ensuring longer-lasting clothes aligned with sustainable circular strategies.

In conclusion, this research explores zero-waste techniques through origami-inspired geometric spaces and 3D CLO spatial experimentation to understand the rules of geometry. By employing origami techniques to create available space on the human body and draping the folded components directly on the mannequin, the project achieves a zero-waste technique in this creative design method. The combination with a modular design concept not only enhances the fun of wearing, akin to Lego, but also reinforces sustainable design strategies. This includes developing a relationship between the wearer and the garment, making it easy to repair and renew folded components, avoiding the need to replace the entire garment, among other benefits.